Analyzing the Health Issue: The Story Behind the Baselines

The Epidemiology of the Baselines

Now that the SAC has selected the critical health issue for its community of interest, it is time to analyze the problem—i.e., get beyond the statistics and ferret out the "story" that lies behind these baselines and that contains the seeds of potential solutions. As one source put it:

- "We'd be better off analyzing <u>why</u>…the problem is occurring, rather than simply jumping in and trying to fix it.
- A good analysis will lead to better long-run solutions. And therefore:
- A good analysis is worth taking the time to do."[1]

This is where the SAC members ask: "What's going on here? Why does the baseline look the way it does?" A beginning step is to look at the epidemiology of the baseline[2]—the distribution of the selected health issue in the region. Who has it, what do they look like (age, gender, ethnicity, income, education, etc.)? Do some within a group have it more than others? Where are the people who have the condition—are they throughout the region or just in certain areas? What patterns of personal attributes and geographical distribution can we see? Key informants and potential partners can be helpful here as the SAC members seek to gain a clear understanding of what their indicator population of concern looks like. When the SAC members have a credible picture of the indicator population, they can move to the next level of analysis: What are the forces at work?

Forces at Work

Community health problems generally are caused by many different and interrelated factors, and they generally are resolved by different and interrelated outcomes. But there are some categories of factors that can influence the likelihood of problem resolution: these are called "risk" and "protective" factors. Often, "protective" factors are also called "assets." By asking what are the risk and protective factors for the population of concern, and understanding how these factors interact, the SAC members will be more able to focus the health improvement initiative to contribute to positive results.

Both risk and protective factors are generally grouped into two categories: those that are personal characteristics of individuals, and those that occur in the environment (both socially and physically. Personal factors are things that are unique to each individual (or group of individuals)—knowledge and skill; experience and history; and genetic makeup. Environmental factors are things that are not specific to each person, but rather affect one or more groups of people in the community. Such factors include aspects of the social environment—e.g., norms and behaviors of family, friends and others; and aspects of the physical environment—e.g., access to resources, exposure to hazards, and overall living conditions. (***Using risk and protective factors to select targets and strategies…*** in the "Tools" section summarizes these categories.)

There are some general principles about risk and protective factors that have been identified through research. These include:

- **Many risk and protective factors are related to multiple community outcomes**—i.e., they are important factors in almost all community health concerns. These make a good place to begin developing a local list.
- **Not all risk and protective factors are created equal**—i.e., some factors are more influential than others. Considering the relative importance of each factor will help in prioritizing actions later on.
- **The more risk factors a person has, the greater the likelihood they will engage in an given unhealthy behavior, and the more protective factors they have, the less likely they are to engage in that behavior.**

Risk and protective factors relevant to the population of concern can be identified by reviewing general existing data. Where the existing data fall short, the SAC members can supplement with information they gather through brainstorming, or using focus groups. (***The …Coalition on Access to Health Care…list of questions*** in the "Tools" section shows an example of focus group questions.) Key informants, including persons with the condition of concern, and potential partners can be helpful to this step.[3]

Tools for this section: Using risk and protective factors to select targets and strategies…, The…Coalition on Access to Health Care…list of questions,

Root Causes

To really understand "what's going on here?" the SAC members will need to look at underlying, or "root," causes of the health issue of concern. As one source noted, "A problem is usually caused by something: what is that something? We should find out. And often the problem we see is a symptom of something else."[4]

Root causes are the basic reasons behind the problem or issue that is seen in the community. Trying to figure out why the problem or issue developed is an essential part of the problem-solving process. Done correctly, and with participation by community members, this step will increase the likelihood of right responses to the situation as well as enhance citizen "ownership" of the problem.

Using a framework such as the "field" or the "rainbow" models of determinants of health (presented in the "Introduction" to this workbook) to guide the analysis can be helpful for ensuring that consideration is given not only to the disease but also the broader array of factors in the physical and social environments. For example:

- Social Environment and Prosperity: Elements linked to health include family structure, the educational system, social networks, social class, work setting, and level of prosperity.
- Physical Environment: Examples include exposures to toxic substances (lung disease and cancer), safety at home and work (injuries), the design of vehicles and roadways (crash survival rates), poor housing conditions and overcrowding.

- Genetic Endowment: An emerging area of importance, currently understood as contributing to a greater or lesser risk for health outcomes. Genetic factors are linked with behavior and also interact with social and environmental factors to influence health.
- Behavior: Shaped by multiple forces, particularly the social and physical environments and genetic endowment.
- Health Care: An essential determinant of health.

Using this organizational approach, the strongest determinants of health or those that may present the most promising opportunities for change may be identified. Such an analysis can help community stakeholders see what kinds of health improvement activities may be useful as well as highlighting who in the community might be expected to assume responsibility for some aspect of the health improvement.[5]

It is important to work historically backward as far as possible to identify early interventions that could be developed to prevent the problem from occurring in the future. As one moves backwards, through the direct causes, or "precursors," to secondary and then tertiary levels, one may find that one factor at one level is related to one or more factors at the next level. [6] A key technique for this step is the "But why?" technique. This technique examines a problem by asking questions to find out what caused it. Each time an answer is given, a follow-up "But why?" is asked.[7]

A companion step to the identification of root causes is the determination of what the consequences of such causes (problems) might be if they go unaddressed—also called a "consequence analysis." The key question at each level of this step is: "So what if this problem occurs?" As with the "precursor" step above, as one moves through the levels of consequences from direct to tertiary, one may find multiple relationship between factors at the next level.[8] (***Problem analysis*** in the "Tools" section presents a format for this kind of analysis.) This step will help consider the possibility of future problems, and it also will be helpful it prioritizing targets and designing interventions.

Having gone through the steps of analyzing the epidemiology of the baseline, identifying the risk and protective factors, and analyzing the root causes of the selected health issue, the SAC should now have a clearer understanding of the "story behind the baseline." The members may also have some beginning ideas on who to target for possible change efforts. And finally, there should also begin to emerge some notions of potential partners to effect a health improvement initiative, for the SAC members generally cannot, nor should they, do it alone.

Tools for this section: Problem Analysis

Notes

[1] KU Work Group on Health Promotion and Community Development. (2000). Chapter 3, Section 5: Analyzing Community Problems. Lawrence, KS: University of Kansas. Retrieved 8/12/2002 from the World Wide Web: http://ctb.ukans.edu/tools/EN/sub_section_main_1017.htm

[2] Concept adapted from "Turn the Curve Exercise" and "How do we create a baseline (trend line) for an indicator?" in M. Friedman, The Results and Performance Accountability Implementation Guide, Fiscal Policies Studies Institute, 2002. Retrieved 7/12/2002 from the World Wide Web: http://www.raguide.org.

[3] The discussion on risk/protective factors adapted from KU Work Group on Health Promotion and Community Development. (2000). Chapter 19, Section 2: Understanding Risk and Protective Factors: Their Use in Selecting Potential Targets and Promising Strategies for Interventions. Lawrence, KS: University of Kansas. Retrieved 8/21/2002 from the World Wide Web: http://ctb.ukans.edu/tools/EN/sub_section_main_1156.htm

[4] KU Work Group on Health Promotion and Community Development. (2000). Chapter 3, Section 5: Analyzing Community Problems, op. cit.

[5] Adapted from "Understanding Health and Its Determinants" and "A Community Health Improvement Process," in Improving Health in the Community: A Role for Performance Monitoring, JS Durch, LA Bailey, MA Stoto, eds., National Academy Press, Washington, D.C., 1997, p.91. Retrieved 7/2/2002 from the World Wide Web: http://www.nap.edu/openbook/0309055342/html.

[6] Chapter 3: Decision Analysis, in GP Loos, Technical Field Guide for International Health Planners and Managers (Second Draft). School of Public Health, University of Hawaii, April, 1992, p.18.

[7] Technique adapted from KU Work Group on Health Promotion and Community Development. (2000). Chapter 17, Section 4: Analyzing Root Causes of Problems: The "But Why?" Technique. Lawrence, KS: University of Kansas. Retrieved 8/21/2002 from the World Wide Web:http://ctb.ukans.edu/tools/EN/sub_section_main_1128.htm

[8] Chapter 3: Decision Analysis, op. cit., p. 20.

Tools

Using risk and protective factors to select targets and strategies (components) for a comprehensive intervention*			
Realm	**What** ***Candidate Risk and Protective Factors***	**Who** ***Potential Targets or Beneficiaries of the Intervention***	**How** ***Potential Strategies (or components) for the Comprehensive Intervention***
Personal	1. Knowledge and skills • Knowledge • Beliefs • Skills • Education and training	Those with less formal education or training	Providing information and enhancing skills (e.g., of targets and agents of change)
Personal	2. Experience and history • Experience • Cultural norms and religious practices • Social status	Those with a history of neglect, discrimination, or inability to attain their goals Those with family or cultural practices that increase risk of adverse outcomes	Enhance services and support Modify opportunities
Personal	3. Biology and genetics • Type and degree of existing health • Cognitive, mental and physical ability • Chronic illness • Gender and age • Genetic predisposition	Those with existing health impairments or physical or mental disabilities	Enhance services and support
Environmental	4. Support and services • Availability and continuity of social support and ties • Availability of appropriate services • Availability of resources	Those who are socially isolated, who have specialized needs, or who lack resources	Enhance services and support

* Adapted from The Community Tool Box, http://ctb.ukans.edu/.

Using risk and protective factors to select targets and strategies (components) for a comprehensive intervention*			
Realm	**What** ***Candidate Risk and Protective Factors***	**Who** ***Potential Targets or Beneficiaries of the Intervention***	**How** ***Potential Strategies (or components) for the Comprehensive Intervention***
Environmental	5. Access, barriers, and opportunities • Physical access and barriers • Communication access and barriers • Competing requirements for participation	Those with limited access and few opportunities	Modify access, barriers, and opportunities
Environmental	6. Consequences of efforts • Social approval and disapproval • Incentives and disincentives • Time costs and delays	Those who lack social approval, incentives, or have competing requirements	Change the consequences
Environmental	7. Policies and living conditions • Policies • Financial barriers and resources • Exposure to hazards • Living conditions • Poverty and disparities in status	Those living in poverty, with limited social status, or for whom there are inequalities in outcomes	Modify policies

* Adapted from The Community Tool Box, http://ctb.ukans.edu/.

The …Coalition on Access to Health Care…list of questions to guide the discussion on risk and protective factors: [*]

- Is health care available for everyone in our community? Why or why not?
- What stops people from receiving the health care they need?
- What members of our community aren't receiving adequate health care?
- What things help our community to be healthy? What are the things our community does best to improve its health?
- Does our community adequately (and sensitively) meet the needs of different ethnic groups? Of people of all sexual orientations? Of youth and of the elderly? Of those without health insurance? Of the homeless? Of people with disabilities?

[*] Adapted from the Community Tool Box, http://ctb.ukans.edu

Problem Analysis*

Inputs to the Problem				Outputs from the Problem		
Historical Timeline Precursor Conditions				Future Timeline Consequence Conditions		
Tertiary Precursors	Secondary Precursors	Direct Precursors		Direct Consequences	Secondary Consequences	Tertiary Consequences
T.P	**S.P.**	**D.P.**	**HEALTH PROBLEM**	**D.C.**	**S.C.**	**T.C.**

* Adapted from Chapter 3: Decision Analysis, in GP Loos, Technical Field Guide for International Health Planners and Managers (Second Draft). School of Public Health, University of Hawaii, April, 1992, p.18.